

Amendment and Response
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REMARKS

Restriction Requirement

The Office Action requires a Restriction to one of two inventions: Group I, claims 1-31 and 44; and Group II, claims 32-43 under 35 U.S.C. §121. The Applicant herein elects Group I, claims 1-31 and 44 with traverse in order to expedite the prosecution of this application. The Applicant intends to prosecute these claims in a future divisional patent application claiming priority to the present application.

Pending Claims:

Claims 1-31 and 44-46 are currently pending in the present application. Claims 1, 6, 10, 13, and 44 are amended by the present Amendment. Claims 45 and 46 have been added by the present amendment. Claims 32-43 are withdrawn from consideration. Upon entry of the present Amendment, reconsideration of claims 1-31 and 44-46 is respectfully requested.

Rejection Under 35 U.S.C. §102e

Claims 1-18, 20, 24-31 and 44 are rejected under 35 U.S.C. §102e as being anticipated by U.S. Patent Published Patent Application No. 2003/0194493 A1 to Chang et al. (hereinafter "Chang").

To anticipate a claim under 35 U.S.C. §102, a single reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught by the reference must be inherently present in the reference. Thus, a claim is anticipated by a reference only if each and every element of the claim is described, either expressly or inherently, in a single prior art reference.

Independent Claim 1 and Dependent Claims 2-9

The Applicant respectfully submits that Chang does not describe each and every element of independent claim 1 as currently amended. Independent claim 1 has been amended to recite that the first reaction chamber comprises solid walls that contain a first reactant species and a seal that prevents the first reactant species from escaping. Independent claim 1 has also been

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amended to recite that the second reaction chamber comprises solid walls that contain a second reactant species and a seal that prevents the second reactant species from escaping. Independent claim 1 has also been amended to include a vacuum pump having an input that is in vacuum communication with a region between the first and the second reaction chambers. In addition, independent claim 1 recites that the vacuum pump reduces pressure inside the region between the first and the second reaction chambers to a pressure that is less than a pressure inside the first and the second reaction chamber.

The Applicant submits that there is no description or teaching in Chang of reaction chambers that include solid walls that contain reactant species and seals that prevent the reactant species from escaping. Furthermore, the Applicant submits that there is no description or teaching in Chang of a vacuum pump that reduces pressure inside the region between the first and the second reaction chambers to a pressure that is less than a pressure inside the first and the second reaction chamber.

Instead, Chang describes a platen that is subdivided into wedge-shaped segments by purge gas curtain distributors. Chang refers to these segments as stations. Each of the curtain distributors produce a vertical curtain of purge gas that isolates the process gases used at any one instant of time within any one station from the adjacent stations. See, for example, Chang paragraph 35. Thus, the apparatus described in Chang does not include reaction chambers with solid walls and seals as claimed in independent claim 1.

The vacuum pump described in Chang appears to have an input that is coupled to the bottom of the chamber. See, for example, Chang paragraph 33. The purge gas curtain distributors are positioned in the regions between the stations to inject purge gas into the regions. The purge gas curtain distributors produce a vertical curtain of purge gas that isolates the gases within the adjacent stations. The Applicant believes that the vertical curtains of purge gas cause the pressure inside the regions between the stations to be higher than the pressure inside the stations. Thus, the Applicant submits that Chang does not describe a vacuum pump that reduces pressure inside the region between the first and the second reaction chambers to a pressure that is less than the pressure inside the first and the second reaction chamber as claimed in Independent claim 1.

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Therefore, the Applicant submits that Chang does not anticipate independent claim 10 as currently amended under 35 U.S.C. §102(e). Thus, the Applicant submits that independent claim 10 as currently amended is allowable. The Applicant also submits that dependent claims 2-9 are allowable as depending from an allowable base claim. Furthermore, the Applicant submits that new claim 45 is allowable as depending from an allowable base claim.

Independent Claim 10 and Dependent Claims 11-31

The Applicant respectfully submits that Chang does not describe each and every element of independent claim 10 as currently amended. Independent claim 10 has been amended to recite that the first reaction chamber comprises solid walls that contain a first reactant species and a seal that prevents the first reactant species from escaping. Independent claim 10 has also been amended to recite that the second reaction chamber comprises solid walls that contain a second reactant species and a seal that prevents the second reactant species from escaping. Independent claim 1 has also been amended to include a vacuum pump having an input that is in vacuum communication with a region between the first and the second reaction chambers. In addition, independent claim 1 recites that the vacuum pump reduces pressure inside the region between the first and the second reaction chambers to a pressure that is less than a pressure inside the first and the second reaction chamber.

As described in connection with the rejection of independent claim 1, Chang does not describe reaction chambers with solid walls, the seals, and the vacuum pump as claimed in independent claim 10. Therefore, the Applicant submits that Chang does not anticipate independent claim 10 as currently amended under 35 U.S.C. §102(e). Thus, the Applicant submits that independent claim 10 as currently amended is allowable. The Applicant also submits that dependent claims 11-31 are allowable as depending from an allowable base claim. Furthermore, the Applicant submits that new claim 46 is allowable as depending from an allowable base claim.

Independent Claim 44

The Applicant respectfully submits that Chang does not describe each and every element of independent claim 44 as currently amended. Independent claim 44 has been amended to

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recite that the first reaction chamber comprises solid walls that contain a first reactant species and a seal that prevents the first reactant species from escaping. Independent claim 44 has also been amended to recite that the second reaction chamber comprises solid walls that contain a second reactant species and a seal that prevents the second reactant species from escaping. In addition, independent claim 44 now recites a means for evacuating a region between the first and the second reaction chambers to a pressure that is less than a pressure inside the first and the second reaction chamber.

As described in connection with the rejection of independent claim 1, Chang does not describe reaction chambers with solid walls, the seals, and the means for evacuating as claimed in independent claim 44. Therefore, the Applicant submits that Chang does not anticipate independent claim 44 as currently amended under 35 U.S.C. §102(e).

Therefore, the Applicant submits that Chang does not anticipate independent claim 44 as currently amended under 35 U.S.C. §102(c). Thus, the Applicant submits that independent claim 44 as currently amended is allowable.

Rejection Under 35 U.S.C. §103a

Dependent claims 19, 21, 22 and 23 are rejected under 35 U.S.C. §103(a). The Applicant respectfully requests reconsideration of these claims in light of the amendment to independent claim 10. As stated above, the Applicant submits that independent claim 10 as currently amended is allowable and that dependent claims 11-31 are allowable as depending from an allowable base claim.

CONCLUSION

Claims 1-31 and 44-46 are currently pending in the present application. Claims 1, 6, 10, 13, and 44 are amended by the present Amendment. New claims 45-46 have been added. In view of the foregoing, reconsideration and allowance of all pending claims (i.e., claims 1-31 and 44-46) is respectfully requested.

The Commissioner is hereby authorized to charge any proper fees to Attorney's Deposit Account No. 501211.

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If, in the Examiner's opinion, a telephonic interview would expedite prosecution of the present application, the undersigned attorney would welcome the opportunity to discuss any outstanding issues, and to work with the Examiner toward placing the application in condition for allowance.

Date: February 17, 2005
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Respectfully submitted,


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